

REMARKS

Claims 1, 60, and 110-128 are pending in the application. Claims 60, and 114-118 are amended.

Support for the amendments to claims 60 and 114-118 is found in the original claims and specification.

Rejections under 35 U.S.C. § 102

Claims 110-128 are rejected under 35 U.S.C. § 102(b) as anticipated by EP-246,366 (EP '366).

The Office action asserts that "EP '366 teaches edible hydrogenated fat compositions derived from marine, animal, and vegetable oils and can be used in the formulation of margarines." OA at 2. Applicants respectfully disagree.

Claim 110 recites in part, "[a] partially hydrogenated sunflower oil ... has a ratio of cis- to trans- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) of at least about 15; has a ratio of C18 to trans- forms of C18:1, C18:2 and C18:3 fatty acids (C18 : TFA) of at least about 1.2; and an induction period at 120° C of at least about 5 hours." EP '366 does not disclose a partially hydrogenated sunflower oil having the specific profiles recited in claim 110. To the contrary and as set forth above, the Office action only asserts that "EP '366 teaches edible hydrogenated fat compositions derived from marine, animal, and vegetable oils and can be used in the formulation of margarines." Because EP '366 does not teach all elements of claim 110, claim 110 is not anticipated by EP '366.

Because claims 114-124 depend from claim 110, claims 114-124 are patentable over EP '366 for at least the reasons set forth above with respect to claim 110.

Claim 111 recites in part, "[a] partially hydrogenated sunflower oil that ... has a ratio of cis- to trans- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) of at least

about 25; has a ratio of C18 to trans- forms of C18:1, C18:2 and C18:3 fatty acids (C18 : TFA) of at least about 1.5; and an induction period at 120° C of at least about 10 hours." EP '366 does not disclose a partially hydrogenated sunflower oil having the specific profiles recited in claim 111. To the contrary and as set forth above, the Office action only asserts that "EP '366 teaches edible hydrogenated fat compositions derived from marine, animal, and vegetable oils and can be used in the formulation of margarines." Because EP '366 does not teach all elements of claim 111, claim 111 is not anticipated by EP '366.

Because claims 125-128, depend from claim 111, claims 125-128 are patentable over EP '366 for at least the reasons set forth above with respect to claim 111.

Claim 112 recites in part, "[a] partially hydrogenated palmolein fat that ... has a C18:2 content of no greater than about 7 weight percent; has a trans-fatty acid content of no more than about 6 weight percent; and has a ratio of cis- to trans- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) of at least about 6." EP'366 does not disclose a partially hydrogenated palmolein fat having the specific profiles recited in claim 112. To the contrary and as set forth above, the Office action only asserts that "EP '366 teaches edible hydrogenated fat compositions derived from marine, animal, and vegetable oils and can be used in the formulation of margarines." Because EP '366 does not teach all elements of claim 112, claim 112 is not anticipated by EP '366.

Claim 113 recites in part, "[a] partially hydrogenated corn oil that ... has a C18:2 content of no greater than about 50 weight percent; has a trans-fatty acid content of no more than about 6 weight percent; and has a ratio of cis- to trans- forms of C18:1, C18:2 and C18:3 fatty acids (CFA : TFA) of at least about 15." EP '366 does not disclose a partially hydrogenated corn oil having the specific profiles recited in claim 113. To the contrary and as set forth above, the Office action only asserts that "EP '366 teaches edible hydrogenated fat compositions derived from marine, animal, and vegetable oils and can be used in the formulation of margarines." Because EP '366 does not teach all elements of claim 113, claim 113 is not anticipated by EP '366.

Rejections under 35 U.S.C. § 103

Claims 1 and 60 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boerma US Patent 4,696,911 (US '911) in view of Maskaeve et al. and EP '366.

The Office action states that "US '911 teaches a nickel-base catalyst composition prepared in the presence of a process gas and fat component at a temperature of at least about 80°C; which is then contacted with an unsaturated feedstock at a second temperature no greater than 70°C producing a hydrogenated feedstock." OA at 3. The Office action further asserts that although the reference differs from the claims by "reciting an upper temperature of 80°C for the preparation of the catalyst[,] it would have been obvious to one of ordinary skill in the art ... to increase the temperature of the catalyst preparation. Maskaeve et al. discloses a process of hydrogenation utilizing different nickel containing catalyst suspended in oil... the preparation of reduced nickel containing catalyst wherein the temperature of at least about 100 °C in the presence of a process gas." OA at 3. The Office action then concludes that "[t]herefore it would have been obvious to one of ordinary skill in the art to modify the process taught by Boerma et al (US '911) by increasing the temperature range in preparing the catalyst because it is conventionally known...." OA at 3. The Office action further asserts that "EP '366 discloses said catalyst can be prepared in a nitrogen atmosphere." OA at 4.

Claim 1 recites in part "[a] method of hydrogenating an unsaturated feedstock, comprising: producing a catalyst composition by heating a nickel-based catalyst to a first temperature of at least about 85° C...." To the contrary, the temperature range disclosed in US '911 is "between 0° and 80° C., preferably between 20° and 60° C." US '911 at column 2, lines 22-23. Furthermore, in US '911, the "catalyst is prepared in a solvent, usually in a volatile polar solvent such as a C1-C3 alkanol. Preferably ethanol is [to] be used." US '911 at column 2, lines 13-14. One of ordinary skill in the art will understand the importance of keeping the catalyst preparation below 80° C to lower evaporation of

the volatile solvent. Accordingly, one skilled in the art would not modify US '911 to include "producing a catalyst composition by heating a nickel-based catalyst to a first temperature of at least about 85° C" as claimed.

Maskaev et al. does not remedy the deficiencies of US '911. Specifically, Maskaev discloses preparation of a reduced nickel containing catalyst at 230-250 °C (Maskaev et al. at page 436, paragraph 6). One skilled in the art would not modify the disclosure of US '911 in view of the importance of keeping the catalyst preparation below 80° C to lower evaporation of the volatile solvent set forth above.

Similarly, EP '366 does not remedy the deficiencies of US '911. EP '366 discloses a hydrogenation process using a nickel catalyst at about 160° C to 250° C. EP '366 at lines 22-26, page 3. Therefore, EP '366 does not cure the deficiency of US '911 and Maskaev et al for the same reasons set forth above.

Accordingly, claim 1 is patentable over US '911 in view of Maskaev et al. and EP '366.

Similarly, amended claim 60 recites in part, "[a] substantially platinum-free hydrogenation catalyst composition comprising ... a nickel-based catalyst dispersed in the protective non-gas medium, wherein the nickel-based catalyst being prepared at a first temperature of at least about 85°C...."

Accordingly, claim 60 is patentable over US '911 in view of Maskaev et al. and EP '366 for at least the same reasons set forth with respect to claim 1.

CONCLUSION

In view of the above amendments, Applicants believe the pending application is in condition for allowance.

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